

ABSTRACT

The compact imaging assembly has an electronic imager and an objective lens with a focal length f_0 . The objective lens receives light and forms an image of the object on the imager's image plane. The image plane has a maximum effective dimension DI . The objective lens has a lens group with an object surface facing the object and an image surface facing an image plane. The objective lens also has a middle lens element with a concave object surface that is facing the lens group image surface, and a final lens element that has a positive power. The lens group has a focal length $f_1 > 0$. The distance from the lens group object surface to the image plane is the lens height TT . The lens group, the middle lens and the final lens elements are coaxially aligned and on an optical axis normal to the image plane.